

aver that they are to serve as patterns for printed cottons; an opinion worthy of a native of my "auld toon of Glasgow."

By the boxes I wrote you a few lines, but I expect this letter will reach you first, as I forward it to Pernambuco by a person whom I am sending thither to bring me my letters or anything that may be lying there for me, as I begin to feel anxious about my friends, from whom I have had no news for nine whole months. It will take him more than a month to go and return, but he will still be back before I start for Piahy.

I had great difficulty in obtaining wood wherewith to make the boxes which I have just despatched, and as to any help in the way of making them, it was needful, after I had bought up at great expense all the old boxes in the town, to put them together with my own hands, which are now so blistered with the use of the hammer and saw that I can hardly hold my pen. Necessity has no law; from cooking downwards I have to do almost everything. Insects are very rare here. I had collected a few dozens and laid them on the house-top at night to dry in a sheet of paper, as the weather had been damp; but in the morning I had the mortification to find them all gone except some of the legs and wings, which vexed me the more as many of them were new. I shall recommence collecting immediately.

#### BIBLIOGRAPHICAL NOTICES.

*De Pinibus Taurico-Caucasicis.* Auctore Steven\*.

In a preceding paper the propriety of considering the Caucasian pines as a separate group was suggested, under the idea that they would be found to differ from those of Europe, and that united with those of Northern Asia they might prove to be of sufficient importance to require a separate classification in the pinology of the globe. These views have been completely confirmed by the work we are about to examine, and at a much more recent period than we had ventured to anticipate. We are indebted to M. Steven for bringing together at one view the results not only of his own researches, but those of Nordmann, Wittman, Sovitz and others; a course which cannot be too much commended from its superiority to the usual practice in this sort of publication of giving the isolated discoveries or observations of the writer, whilst those of others are carefully withheld from notice.

\* For this review we are indebted to the kindness of Capt. S. E. Cook, R.N.—EDIT.

aver that they are to serve as patterns for printed cottons; an opinion worthy of a native of my "auld toon of Glasgow."

By the boxes I wrote you a few lines, but I expect this letter will reach you first, as I forward it to Pernambuco by a person whom I am sending thither to bring me my letters or anything that may be lying there for me, as I begin to feel anxious about my friends, from whom I have had no news for nine whole months. It will take him more than a month to go and return, but he will still be back before I start for Piahy.

I had great difficulty in obtaining wood wherewith to make the boxes which I have just despatched, and as to any help in the way of making them, it was needful, after I had bought up at great expense all the old boxes in the town, to put them together with my own hands, which are now so blistered with the use of the hammer and saw that I can hardly hold my pen. Necessity has no law; from cooking downwards I have to do almost everything. Insects are very rare here. I had collected a few dozens and laid them on the house-top at night to dry in a sheet of paper, as the weather had been damp; but in the morning I had the mortification to find them all gone except some of the legs and wings, which vexed me the more as many of them were new. I shall recommence collecting immediately.

#### BIBLIOGRAPHICAL NOTICES.

*De Pinibus Taurico-Caucasicis.* Auctore Steven\*.

In a preceding paper the propriety of considering the Caucasian pines as a separate group was suggested, under the idea that they would be found to differ from those of Europe, and that united with those of Northern Asia they might prove to be of sufficient importance to require a separate classification in the pinology of the globe. These views have been completely confirmed by the work we are about to examine, and at a much more recent period than we had ventured to anticipate. We are indebted to M. Steven for bringing together at one view the results not only of his own researches, but those of Nordmann, Wittman, Sovitz and others; a course which cannot be too much commended from its superiority to the usual practice in this sort of publication of giving the isolated discoveries or observations of the writer, whilst those of others are carefully withheld from notice.

\* For this review we are indebted to the kindness of Capt. S. E. Cook, R.N.—EDIT.

aver that they are to serve as patterns for printed cottons; an opinion worthy of a native of my "auld toon of Glasgow."

By the boxes I wrote you a few lines, but I expect this letter will reach you first, as I forward it to Pernambuco by a person whom I am sending thither to bring me my letters or anything that may be lying there for me, as I begin to feel anxious about my friends, from whom I have had no news for nine whole months. It will take him more than a month to go and return, but he will still be back before I start for Piahy.

I had great difficulty in obtaining wood wherewith to make the boxes which I have just despatched, and as to any help in the way of making them, it was needful, after I had bought up at great expense all the old boxes in the town, to put them together with my own hands, which are now so blistered with the use of the hammer and saw that I can hardly hold my pen. Necessity has no law; from cooking downwards I have to do almost everything. Insects are very rare here. I had collected a few dozens and laid them on the house-top at night to dry in a sheet of paper, as the weather had been damp; but in the morning I had the mortification to find them all gone except some of the legs and wings, which vexed me the more as many of them were new. I shall recommence collecting immediately.

#### BIBLIOGRAPHICAL NOTICES.

*De Pinibus Taurico-Caucasicis.* Auctore Steven\*.

In a preceding paper the propriety of considering the Caucasian pines as a separate group was suggested, under the idea that they would be found to differ from those of Europe, and that united with those of Northern Asia they might prove to be of sufficient importance to require a separate classification in the pinology of the globe. These views have been completely confirmed by the work we are about to examine, and at a much more recent period than we had ventured to anticipate. We are indebted to M. Steven for bringing together at one view the results not only of his own researches, but those of Nordmann, Wittman, Sovitz and others; a course which cannot be too much commended from its superiority to the usual practice in this sort of publication of giving the isolated discoveries or observations of the writer, whilst those of others are carefully withheld from notice.

\* For this review we are indebted to the kindness of Capt. S. E. Cook, R.N.—EDIT.

aver that they are to serve as patterns for printed cottons; an opinion worthy of a native of my "auld toon of Glasgow."

By the boxes I wrote you a few lines, but I expect this letter will reach you first, as I forward it to Pernambuco by a person whom I am sending thither to bring me my letters or anything that may be lying there for me, as I begin to feel anxious about my friends, from whom I have had no news for nine whole months. It will take him more than a month to go and return, but he will still be back before I start for Piahy.

I had great difficulty in obtaining wood wherewith to make the boxes which I have just despatched, and as to any help in the way of making them, it was needful, after I had bought up at great expense all the old boxes in the town, to put them together with my own hands, which are now so blistered with the use of the hammer and saw that I can hardly hold my pen. Necessity has no law; from cooking downwards I have to do almost everything. Insects are very rare here. I had collected a few dozens and laid them on the house-top at night to dry in a sheet of paper, as the weather had been damp; but in the morning I had the mortification to find them all gone except some of the legs and wings, which vexed me the more as many of them were new. I shall recommence collecting immediately.

#### BIBLIOGRAPHICAL NOTICES.

*De Pinibus Taurico-Caucasicis.* Auctore Steven\*.

In a preceding paper the propriety of considering the Caucasian pines as a separate group was suggested, under the idea that they would be found to differ from those of Europe, and that united with those of Northern Asia they might prove to be of sufficient importance to require a separate classification in the pinology of the globe. These views have been completely confirmed by the work we are about to examine, and at a much more recent period than we had ventured to anticipate. We are indebted to M. Steven for bringing together at one view the results not only of his own researches, but those of Nordmann, Wittman, Sovitz and others; a course which cannot be too much commended from its superiority to the usual practice in this sort of publication of giving the isolated discoveries or observations of the writer, whilst those of others are carefully withheld from notice.

\* For this review we are indebted to the kindness of Capt. S. E. Cook, R.N.—EDIT.

The original work appears to have been published by the Imperial Society of Natural History at Moscow, we rather believe since the death of the author, which has taken place recently. Not having seen the paper itself, we have made use of the copy which is given in the 'Annales des Sciences Naturelles' of January 1839.

M. Steven is of opinion that the *Pinus* should be preserved entire as proposed by Linnæus, and accordingly calls all the species *Pinus*. Having mentioned this subject in the preceding paper we have nothing to add at present; but we must observe that, agreeing perfectly with M. Steven in his principal position, we think he is unnecessarily and most inconveniently tenacious about species, as we shall see in the examination of his work.

The first species described is a variety of *A. pectinata*, or silver fir, which differs from it in having the branchlets smooth which in the congener are pubescent, and the name of *leioclada* is proposed to be affixed to it. Tournefort, who noticed it near Trapezas, considered it to be absolutely identical with the common species of the Alps and Pyrenees. It was found on the higher range of the Caucasus by the author of the 'Flora Caucasica,' though he has not given the locality, and branches were sent by Sovitz, which he had gathered on the range of Adshar, above Guriel, where it was also seen by Nordmann. Although it cannot be positively asserted, the inference may be drawn, that its place is below that of the following species.

No. 2. *Abies Nordmanni* is a new silver fir, which was discovered in 1836 on the range of the Adshar, at an elevation of 6000 feet, by M. Nordmann, whose name has been most justly conferred upon it. It was also seen by Wittman on the southern slope of the range between Cartalinia and Achalziche, near Azchur, as high as the alpine region, where it was mixed with the *A. orientalis*. It attains the height of 80 feet in the stem, and is above 3 feet in diameter. Cones are produced in from fourteen to sixteen years, at first near the summit, from which they descend in the adult tree, covering the branches to within a fourth part of their height, growing upright, single, binary and ternary, and exuding quantities of resin. The seed ripens at the end of September, when the cone immediately falls to pieces, leaving the spindle or axis, which sometimes remains for the whole year. The wood is harder than that of *P. orientalis*, and is not so liable to be attacked by the larvæ of insects as that species.

From the description of this most noble tree it would appear to be connected with *A. Pichta*, or the silver fir of the north of Asia. The

The original work appears to have been published by the Imperial Society of Natural History at Moscow, we rather believe since the death of the author, which has taken place recently. Not having seen the paper itself, we have made use of the copy which is given in the 'Annales des Sciences Naturelles' of January 1839.

M. Steven is of opinion that the *Pinus* should be preserved entire as proposed by Linnæus, and accordingly calls all the species *Pinus*. Having mentioned this subject in the preceding paper we have nothing to add at present; but we must observe that, agreeing perfectly with M. Steven in his principal position, we think he is unnecessarily and most inconveniently tenacious about species, as we shall see in the examination of his work.

The first species described is a variety of *A. pectinata*, or silver fir, which differs from it in having the branchlets smooth which in the congener are pubescent, and the name of *leioclada* is proposed to be affixed to it. Tournefort, who noticed it near Trapezas, considered it to be absolutely identical with the common species of the Alps and Pyrenees. It was found on the higher range of the Caucasus by the author of the 'Flora Caucasica,' though he has not given the locality, and branches were sent by Sovitz, which he had gathered on the range of Adshar, above Guriel, where it was also seen by Nordmann. Although it cannot be positively asserted, the inference may be drawn, that its place is below that of the following species.

No. 2. *Abies Nordmanni* is a new silver fir, which was discovered in 1836 on the range of the Adshar, at an elevation of 6000 feet, by M. Nordmann, whose name has been most justly conferred upon it. It was also seen by Wittman on the southern slope of the range between Cartalinia and Achalziche, near Azchur, as high as the alpine region, where it was mixed with the *A. orientalis*. It attains the height of 80 feet in the stem, and is above 3 feet in diameter. Cones are produced in from fourteen to sixteen years, at first near the summit, from which they descend in the adult tree, covering the branches to within a fourth part of their height, growing upright, single, binary and ternary, and exuding quantities of resin. The seed ripens at the end of September, when the cone immediately falls to pieces, leaving the spindle or axis, which sometimes remains for the whole year. The wood is harder than that of *P. orientalis*, and is not so liable to be attacked by the larvæ of insects as that species.

From the description of this most noble tree it would appear to be connected with *A. Pichta*, or the silver fir of the north of Asia. The

The original work appears to have been published by the Imperial Society of Natural History at Moscow, we rather believe since the death of the author, which has taken place recently. Not having seen the paper itself, we have made use of the copy which is given in the 'Annales des Sciences Naturelles' of January 1839.

M. Steven is of opinion that the *Pinus* should be preserved entire as proposed by Linnæus, and accordingly calls all the species *Pinus*. Having mentioned this subject in the preceding paper we have nothing to add at present; but we must observe that, agreeing perfectly with M. Steven in his principal position, we think he is unnecessarily and most inconveniently tenacious about species, as we shall see in the examination of his work.

The first species described is a variety of *A. pectinata*, or silver fir, which differs from it in having the branchlets smooth which in the congener are pubescent, and the name of *leioclada* is proposed to be affixed to it. Tournefort, who noticed it near Trapezas, considered it to be absolutely identical with the common species of the Alps and Pyrenees. It was found on the higher range of the Caucasus by the author of the 'Flora Caucasica,' though he has not given the locality, and branches were sent by Sovitz, which he had gathered on the range of Adshar, above Guriel, where it was also seen by Nordmann. Although it cannot be positively asserted, the inference may be drawn, that its place is below that of the following species.

No. 2. *Abies Nordmanni* is a new silver fir, which was discovered in 1836 on the range of the Adshar, at an elevation of 6000 feet, by M. Nordmann, whose name has been most justly conferred upon it. It was also seen by Wittman on the southern slope of the range between Cartalinia and Achalziche, near Azchur, as high as the alpine region, where it was mixed with the *A. orientalis*. It attains the height of 80 feet in the stem, and is above 3 feet in diameter. Cones are produced in from fourteen to sixteen years, at first near the summit, from which they descend in the adult tree, covering the branches to within a fourth part of their height, growing upright, single, binary and ternary, and exuding quantities of resin. The seed ripens at the end of September, when the cone immediately falls to pieces, leaving the spindle or axis, which sometimes remains for the whole year. The wood is harder than that of *P. orientalis*, and is not so liable to be attacked by the larvæ of insects as that species.

From the description of this most noble tree it would appear to be connected with *A. Pichta*, or the silver fir of the north of Asia. The

The original work appears to have been published by the Imperial Society of Natural History at Moscow, we rather believe since the death of the author, which has taken place recently. Not having seen the paper itself, we have made use of the copy which is given in the 'Annales des Sciences Naturelles' of January 1839.

M. Steven is of opinion that the *Pinus* should be preserved entire as proposed by Linnæus, and accordingly calls all the species *Pinus*. Having mentioned this subject in the preceding paper we have nothing to add at present; but we must observe that, agreeing perfectly with M. Steven in his principal position, we think he is unnecessarily and most inconveniently tenacious about species, as we shall see in the examination of his work.

The first species described is a variety of *A. pectinata*, or silver fir, which differs from it in having the branchlets smooth which in the congener are pubescent, and the name of *leioclada* is proposed to be affixed to it. Tournefort, who noticed it near Trapezas, considered it to be absolutely identical with the common species of the Alps and Pyrenees. It was found on the higher range of the Caucasus by the author of the 'Flora Caucasica,' though he has not given the locality, and branches were sent by Sovitz, which he had gathered on the range of Adshar, above Guriel, where it was also seen by Nordmann. Although it cannot be positively asserted, the inference may be drawn, that its place is below that of the following species.

No. 2. *Abies Nordmanni* is a new silver fir, which was discovered in 1836 on the range of the Adshar, at an elevation of 6000 feet, by M. Nordmann, whose name has been most justly conferred upon it. It was also seen by Wittman on the southern slope of the range between Cartalinia and Achalziche, near Azchur, as high as the alpine region, where it was mixed with the *A. orientalis*. It attains the height of 80 feet in the stem, and is above 3 feet in diameter. Cones are produced in from fourteen to sixteen years, at first near the summit, from which they descend in the adult tree, covering the branches to within a fourth part of their height, growing upright, single, binary and ternary, and exuding quantities of resin. The seed ripens at the end of September, when the cone immediately falls to pieces, leaving the spindle or axis, which sometimes remains for the whole year. The wood is harder than that of *P. orientalis*, and is not so liable to be attacked by the larvæ of insects as that species.

From the description of this most noble tree it would appear to be connected with *A. Pichta*, or the silver fir of the north of Asia. The



altitude at which it was discovered proves it to be very hardy, and the early period at which the seed ripens, which I noticed and described as a peculiarity of the *P. uncinata* in my original description of that tree, I consider to indicate the same quality. We must for these reasons, as well as the size the tree attains and the quality of its timber, assign it the very first rank in the family, and its introduction to our parks and forests, both for ornament and utility, is most desirable.

No. 3 appears to be a variety of spruce, to which the inappropriate name of *P. orientalis* has been given; why not *caucasica*? The author first noticed it in the loftiest mountains of Imeritia, and Nordmann has since observed it in Upper Mingrelia, and forming whole forests between Gurjel and the Adshar mountains.

The foliage is shorter by one half than that of the common spruce, and the spiculæ are quadrangular like those of that species; sharp, but not prickly; not binary as Tournefort asserts, but grow singly as in the common spruce.

It is a lofty, and, from the elevated sites at which it was observed, is no doubt a hardy and desirable tree, but from the observation of the timber, compared with that of *A. Nordmanni*, must be considered as less valuable than that magnificent species. Neither the *Pinus Abies* (Lin.) nor any species of larch have yet been discovered in the Caucasus.

#### PINUS.

1. Is the *P. maritima* of Lambert, one of the varieties of *P. halepensis*, and that which I consider to be the more hardy of the three; it grows on the shores of Abshasia, near Pezundan, the ancient Pithyus.

2. "*P. Laricio* constitutes forests on the western summits of Tauria, descending even to the shores, but never passing to the northern declivities. The author also has specimens from Gelindshik, a port on the eastern shore of the Black Sea, 100 leagues distant from the mouths of the Hypanis."

We cannot say that the observations on this species are at all satisfactory. *P. Pallasiana*, or *taurica* of our catalogues, would seem to be considered as identical with *P. Pinaster*, and with the species we have under the name of *P. Laricio*. Such however appears to be the meaning of the text, and as he considers that *P. austriaca* is another synonym, we shall have *Laricio*, *Pinaster*, *P. taurica* and *austriaca* as one species, a position which is not only inadmissible, but so extraordinary as only to be accounted for by the want of opportunities for studying the respective species.

altitude at which it was discovered proves it to be very hardy, and the early period at which the seed ripens, which I noticed and described as a peculiarity of the *P. uncinata* in my original description of that tree, I consider to indicate the same quality. We must for these reasons, as well as the size the tree attains and the quality of its timber, assign it the very first rank in the family, and its introduction to our parks and forests, both for ornament and utility, is most desirable.

No. 3 appears to be a variety of spruce, to which the inappropriate name of *P. orientalis* has been given; why not *caucasica*? The author first noticed it in the loftiest mountains of Imeritia, and Nordmann has since observed it in Upper Mingrelia, and forming whole forests between Gurjel and the Adshar mountains.

The foliage is shorter by one half than that of the common spruce, and the spiculæ are quadrangular like those of that species; sharp, but not prickly; not binary as Tournefort asserts, but grow singly as in the common spruce.

It is a lofty, and, from the elevated sites at which it was observed, is no doubt a hardy and desirable tree, but from the observation of the timber, compared with that of *A. Nordmanni*, must be considered as less valuable than that magnificent species. Neither the *Pinus Abies* (Lin.) nor any species of larch have yet been discovered in the Caucasus.

#### PINUS.

1. Is the *P. maritima* of Lambert, one of the varieties of *P. halepensis*, and that which I consider to be the more hardy of the three; it grows on the shores of Abshasia, near Pezundan, the ancient Pithyus.

2. "*P. Laricio* constitutes forests on the western summits of Tauria, descending even to the shores, but never passing to the northern declivities. The author also has specimens from Gelindshik, a port on the eastern shore of the Black Sea, 100 leagues distant from the mouths of the Hypanis."

We cannot say that the observations on this species are at all satisfactory. *P. Pallasiana*, or *taurica* of our catalogues, would seem to be considered as identical with *P. Pinaster*, and with the species we have under the name of *P. Laricio*. Such however appears to be the meaning of the text, and as he considers that *P. austriaca* is another synonym, we shall have *Laricio*, *Pinaster*, *P. taurica* and *austriaca* as one species, a position which is not only inadmissible, but so extraordinary as only to be accounted for by the want of opportunities for studying the respective species.

altitude at which it was discovered proves it to be very hardy, and the early period at which the seed ripens, which I noticed and described as a peculiarity of the *P. uncinata* in my original description of that tree, I consider to indicate the same quality. We must for these reasons, as well as the size the tree attains and the quality of its timber, assign it the very first rank in the family, and its introduction to our parks and forests, both for ornament and utility, is most desirable.

No. 3 appears to be a variety of spruce, to which the inappropriate name of *P. orientalis* has been given; why not *caucasica*? The author first noticed it in the loftiest mountains of Imeritia, and Nordmann has since observed it in Upper Mingrelia, and forming whole forests between Guriel and the Adshar mountains.

The foliage is shorter by one half than that of the common spruce, and the spiculæ are quadrangular like those of that species; sharp, but not prickly; not binary as Tournefort asserts, but grow singly as in the common spruce.

It is a lofty, and, from the elevated sites at which it was observed, is no doubt a hardy and desirable tree, but from the observation of the timber, compared with that of *A. Nordmanni*, must be considered as less valuable than that magnificent species. Neither the *Pinus Abies* (Lin.) nor any species of larch have yet been discovered in the Caucasus.

#### PINUS.

1. Is the *P. maritima* of Lambert, one of the varieties of *P. halepensis*, and that which I consider to be the more hardy of the three; it grows on the shores of Abshasia, near Pezundan, the ancient Pithyus.

2. "*P. Laricio* constitutes forests on the western summits of Tauria, descending even to the shores, but never passing to the northern declivities. The author also has specimens from Gelindshik, a port on the eastern shore of the Black Sea, 100 leagues distant from the mouths of the Hypanis."

We cannot say that the observations on this species are at all satisfactory. *P. Pallasiana*, or *taurica* of our catalogues, would seem to be considered as identical with *P. Pinaster*, and with the species we have under the name of *P. Laricio*. Such however appears to be the meaning of the text, and as he considers that *P. austriaca* is another synonym, we shall have *Laricio*, *Pinaster*, *P. taurica* and *austriaca* as one species, a position which is not only inadmissible, but so extraordinary as only to be accounted for by the want of opportunities for studying the respective species.

altitude at which it was discovered proves it to be very hardy, and the early period at which the seed ripens, which I noticed and described as a peculiarity of the *P. uncinata* in my original description of that tree, I consider to indicate the same quality. We must for these reasons, as well as the size the tree attains and the quality of its timber, assign it the very first rank in the family, and its introduction to our parks and forests, both for ornament and utility, is most desirable.

No. 3 appears to be a variety of spruce, to which the inappropriate name of *P. orientalis* has been given; why not *caucasica*? The author first noticed it in the loftiest mountains of Imeritia, and Nordmann has since observed it in Upper Mingrelia, and forming whole forests between Guriel and the Adshar mountains.

The foliage is shorter by one half than that of the common spruce, and the spiculæ are quadrangular like those of that species; sharp, but not prickly; not binary as Tournefort asserts, but grow singly as in the common spruce.

It is a lofty, and, from the elevated sites at which it was observed, is no doubt a hardy and desirable tree, but from the observation of the timber, compared with that of *A. Nordmanni*, must be considered as less valuable than that magnificent species. Neither the *Pinus Abies* (Lin.) nor any species of larch have yet been discovered in the Caucasus.

#### PINUS.

1. Is the *P. maritima* of Lambert, one of the varieties of *P. halepensis*, and that which I consider to be the more hardy of the three; it grows on the shores of Abshasia, near Pezundan, the ancient Pithyus.

2. "*P. Laricio* constitutes forests on the western summits of Tauria, descending even to the shores, but never passing to the northern declivities. The author also has specimens from Gelindshik, a port on the eastern shore of the Black Sea, 100 leagues distant from the mouths of the Hypanis."

We cannot say that the observations on this species are at all satisfactory. *P. Pallasiana*, or *taurica* of our catalogues, would seem to be considered as identical with *P. Pinaster*, and with the species we have under the name of *P. Laricio*. Such however appears to be the meaning of the text, and as he considers that *P. austriaca* is another synonym, we shall have *Laricio*, *Pinaster*, *P. taurica* and *austriaca* as one species, a position which is not only inadmissible, but so extraordinary as only to be accounted for by the want of opportunities for studying the respective species.

If we admit any portion of the forests he describes to be composed of the true *Laricio* it leads to an important observation on the habitat of the species. Between Tauria and Corsica there is a difference of three to four degrees of latitude, which is a considerable space, but is increased exceedingly by the relative climate of the two seas. Accordingly, whilst the tree is placed in Corsica at an elevation of 2000 to 3000 feet, it descends to the shore of the Black Sea, and whilst it resists the milder climate of the western slopes of Tauria it is unable to face the Boreal blasts of the steppe which assail the northern face of the chain.

There is no mention made of *P. taurica*, and it seems clear that the tree mentioned inhabiting Tauria as *Laricio*, is that species which the author considers synonymous, but which are quite distinct. The question is, are there two, or are we to consider that the *P. taurica* is that which takes the place above the *halepensis* in Caucasus? It is very probable that both species exist and that the Caucasian may be the true *Laricio*, the Taurian being our *taurica* or *Pallasiana*. In case there be only one species, it takes the middle rank in this region and represents the *Laricio* and *P. hispanica* of the south of Europe, being a little hardier than those species. I have little doubt that this is the true state of the case, and it must be repeated that it is next to impossible to decide a species of *Pinus* from specimens of branches in herbals, on which testimony part of this report seems to be founded.

*P. sylvestris*. We have a description of two or three species under this head, owing to the habit of the writer of generalizing, and his reluctance in admitting species: that which he mentions as being found, though rarely, on the highest summits of Tauria, the elevation of which range is barely within its natural zone, whilst it forms entire forests on the central Caucasus, appears to be our *uncinata* of the Pyrenees. That mentioned as inhabiting the subalpine regions of the Terek, which is also the *P. sibirica* of Ledebour, must be referred to the same species, thus confirming our view in placing it above the common *P. sylvestris*. The differences he mentions in the foliage constantly occur in these trees, and are not sufficient either to cause the removal from one, or the constituting another species upon them, the only real difference being in the cones.

A variety called by him *hamata*, but which he considers a *P. sylvestris*, appears by the description to be quite distinct from that species. It has the cones three inches long, and was found by Wittman in Lasisthan, and by Nordmann in the subalpine regions of Mount Adshar.

If we admit any portion of the forests he describes to be composed of the true *Laricio* it leads to an important observation on the habitat of the species. Between Tauria and Corsica there is a difference of three to four degrees of latitude, which is a considerable space, but is increased exceedingly by the relative climate of the two seas. Accordingly, whilst the tree is placed in Corsica at an elevation of 2000 to 3000 feet, it descends to the shore of the Black Sea, and whilst it resists the milder climate of the western slopes of Tauria it is unable to face the Boreal blasts of the steppe which assail the northern face of the chain.

There is no mention made of *P. taurica*, and it seems clear that the tree mentioned inhabiting Tauria as *Laricio*, is that species which the author considers synonymous, but which are quite distinct. The question is, are there two, or are we to consider that the *P. taurica* is that which takes the place above the *halepensis* in Caucasus? It is very probable that both species exist and that the Caucasian may be the true *Laricio*, the Taurian being our *taurica* or *Pallasiana*. In case there be only one species, it takes the middle rank in this region and represents the *Laricio* and *P. hispanica* of the south of Europe, being a little hardier than those species. I have little doubt that this is the true state of the case, and it must be repeated that it is next to impossible to decide a species of *Pinus* from specimens of branches in herbals, on which testimony part of this report seems to be founded.

*P. sylvestris*. We have a description of two or three species under this head, owing to the habit of the writer of generalizing, and his reluctance in admitting species: that which he mentions as being found, though rarely, on the highest summits of Tauria, the elevation of which range is barely within its natural zone, whilst it forms entire forests on the central Caucasus, appears to be our *uncinata* of the Pyrenees. That mentioned as inhabiting the subalpine regions of the Terek, which is also the *P. sibirica* of Ledebour, must be referred to the same species, thus confirming our view in placing it above the common *P. sylvestris*. The differences he mentions in the foliage constantly occur in these trees, and are not sufficient either to cause the removal from one, or the constituting another species upon them, the only real difference being in the cones.

A variety called by him *hamata*, but which he considers a *P. sylvestris*, appears by the description to be quite distinct from that species. It has the cones three inches long, and was found by Wittman in Lasisthan, and by Nordmann in the subalpine regions of Mount Adshar.

If we admit any portion of the forests he describes to be composed of the true *Laricio* it leads to an important observation on the habitat of the species. Between Tauria and Corsica there is a difference of three to four degrees of latitude, which is a considerable space, but is increased exceedingly by the relative climate of the two seas. Accordingly, whilst the tree is placed in Corsica at an elevation of 2000 to 3000 feet, it descends to the shore of the Black Sea, and whilst it resists the milder climate of the western slopes of Tauria it is unable to face the Boreal blasts of the steppe which assail the northern face of the chain.

There is no mention made of *P. taurica*, and it seems clear that the tree mentioned inhabiting Tauria as *Laricio*, is that species which the author considers synonymous, but which are quite distinct. The question is, are there two, or are we to consider that the *P. taurica* is that which takes the place above the *halepensis* in Caucasus? It is very probable that both species exist and that the Caucasian may be the true *Laricio*, the Taurian being our *taurica* or *Pallasiana*. In case there be only one species, it takes the middle rank in this region and represents the *Laricio* and *P. hispanica* of the south of Europe, being a little hardier than those species. I have little doubt that this is the true state of the case, and it must be repeated that it is next to impossible to decide a species of *Pinus* from specimens of branches in herbals, on which testimony part of this report seems to be founded.

*P. sylvestris*. We have a description of two or three species under this head, owing to the habit of the writer of generalizing, and his reluctance in admitting species: that which he mentions as being found, though rarely, on the highest summits of Tauria, the elevation of which range is barely within its natural zone, whilst it forms entire forests on the central Caucasus, appears to be our *uncinata* of the Pyrenees. That mentioned as inhabiting the subalpine regions of the Terek, which is also the *P. sibirica* of Ledebour, must be referred to the same species, thus confirming our view in placing it above the common *P. sylvestris*. The differences he mentions in the foliage constantly occur in these trees, and are not sufficient either to cause the removal from one, or the constituting another species upon them, the only real difference being in the cones.

A variety called by him *hamata*, but which he considers a *P. sylvestris*, appears by the description to be quite distinct from that species. It has the cones three inches long, and was found by Wittman in Lasisthan, and by Nordmann in the subalpine regions of Mount Adshar.

If we admit any portion of the forests he describes to be composed of the true *Laricio* it leads to an important observation on the habitat of the species. Between Tauria and Corsica there is a difference of three to four degrees of latitude, which is a considerable space, but is increased exceedingly by the relative climate of the two seas. Accordingly, whilst the tree is placed in Corsica at an elevation of 2000 to 3000 feet, it descends to the shore of the Black Sea, and whilst it resists the milder climate of the western slopes of Tauria it is unable to face the Boreal blasts of the steppe which assail the northern face of the chain.

There is no mention made of *P. taurica*, and it seems clear that the tree mentioned inhabiting Tauria as *Laricio*, is that species which the author considers synonymous, but which are quite distinct. The question is, are there two, or are we to consider that the *P. taurica* is that which takes the place above the *halepensis* in Caucasus? It is very probable that both species exist and that the Caucasian may be the true *Laricio*, the Taurian being our *taurica* or *Pallasiana*. In case there be only one species, it takes the middle rank in this region and represents the *Laricio* and *P. hispanica* of the south of Europe, being a little hardier than those species. I have little doubt that this is the true state of the case, and it must be repeated that it is next to impossible to decide a species of *Pinus* from specimens of branches in herbals, on which testimony part of this report seems to be founded.

*P. sylvestris*. We have a description of two or three species under this head, owing to the habit of the writer of generalizing, and his reluctance in admitting species: that which he mentions as being found, though rarely, on the highest summits of Tauria, the elevation of which range is barely within its natural zone, whilst it forms entire forests on the central Caucasus, appears to be our *uncinata* of the Pyrenees. That mentioned as inhabiting the subalpine regions of the Terek, which is also the *P. sibirica* of Ledebour, must be referred to the same species, thus confirming our view in placing it above the common *P. sylvestris*. The differences he mentions in the foliage constantly occur in these trees, and are not sufficient either to cause the removal from one, or the constituting another species upon them, the only real difference being in the cones.

A variety called by him *hamata*, but which he considers a *P. sylvestris*, appears by the description to be quite distinct from that species. It has the cones three inches long, and was found by Wittman in Lasisthan, and by Nordmann in the subalpine regions of Mount Adshar.



Another most curious variety belonging to the same group is given under the name of *argentea*. It is described as having the cones, and foliage of a splendid silvery hue. A single tree was found by Wittman near the village of Artamin, two days journey from Batum in Lasisthania. So remarkable is the account of this tree, that had it depended on the single specimen, we should have been inclined to assign its appearance to some accidental circumstance, but Nordmann also saw trees corresponding in colour on the Adshar range.

We are not informed if the whole range of the Caucasus has been examined, and neither the absolute or relative elevations at which the species are found are perfectly given in this work. The difficulty of forming a correct judgement on these points as well as that ascertaining the exact extent of the ranges mentioned is increased by the want of good maps. From the correctness with which the species are described, however, and the care which has been taken to place them before the reader, an approximation may be made to the attainment of this object. In commencing by the southern coast of the Black Sea, and following the ascending series, we have successively *P. halepensis*, *P. Laricio* (Auctorum), *Abies leioclada* (var. of Common Silver Fir), *A. Nordmanni*, *A. orientalis*, *P. uncinata* and varieties. This arrangement corresponds very nearly with that of the Pyrenees, the upper zone being formed of the hardier species of the group of *P. sylvestris*, with which are mixed the *A. orientalis* and *A. Nordmanni*, which attains a very high elevation, and is succeeded by *A. leioclada*, *P. Laricio*, and *P. halepensis*, that of the Pyrenees in running a line across Catalonia being *P. uncinata* and *sylvestris*, *A. pectinata*, *P. hispanica*, *P. Pinaster*, and *P. halepensis*. The chief difference is in the existence of the spruce, which is wanting in the Pyrenees, and the substitution of *P. Laricio* (or probably *taurica*), for the *hispanica* in the middle region. In both chains the Silver Fir predominates over the other species, and in both the larch is wholly wanting.

In addition to more accurate information as to the actual zones or order of superposition, we should have been glad to know what tree forms the next parallel to the region of firs. In the corresponding region of Europe the beech holds that place, and it would be interesting to ascertain whether in that part of Asia it retains its position or is replaced by some other genus.

The observation of these writers on the wood of *A. Nordmanni* is extremely valuable, and indicates a point which ought to be attended to in all descriptions of new species when it is possible to obtain it.

Another most curious variety belonging to the same group is given under the name of *argentea*. It is described as having the cones, and foliage of a splendid silvery hue. A single tree was found by Wittman near the village of Artamin, two days journey from Batum in Lasisthania. So remarkable is the account of this tree, that had it depended on the single specimen, we should have been inclined to assign its appearance to some accidental circumstance, but Nordmann also saw trees corresponding in colour on the Adshar range.

We are not informed if the whole range of the Caucasus has been examined, and neither the absolute or relative elevations at which the species are found are perfectly given in this work. The difficulty of forming a correct judgement on these points as well as that ascertaining the exact extent of the ranges mentioned is increased by the want of good maps. From the correctness with which the species are described, however, and the care which has been taken to place them before the reader, an approximation may be made to the attainment of this object. In commencing by the southern coast of the Black Sea, and following the ascending series, we have successively *P. halepensis*, *P. Laricio* (Auctorum), *Abies leioclada* (var. of Common Silver Fir), *A. Nordmanni*, *A. orientalis*, *P. uncinata* and varieties. This arrangement corresponds very nearly with that of the Pyrenees, the upper zone being formed of the hardier species of the group of *P. sylvestris*, with which are mixed the *A. orientalis* and *A. Nordmanni*, which attains a very high elevation, and is succeeded by *A. leioclada*, *P. Laricio*, and *P. halepensis*, that of the Pyrenees in running a line across Catalonia being *P. uncinata* and *sylvestris*, *A. pectinata*, *P. hispanica*, *P. Pinaster*, and *P. halepensis*. The chief difference is in the existence of the spruce, which is wanting in the Pyrenees, and the substitution of *P. Laricio* (or probably *taurica*), for the *hispanica* in the middle region. In both chains the Silver Fir predominates over the other species, and in both the larch is wholly wanting.

In addition to more accurate information as to the actual zones or order of superposition, we should have been glad to know what tree forms the next parallel to the region of firs. In the corresponding region of Europe the beech holds that place, and it would be interesting to ascertain whether in that part of Asia it retains its position or is replaced by some other genus.

The observation of these writers on the wood of *A. Nordmanni* is extremely valuable, and indicates a point which ought to be attended to in all descriptions of new species when it is possible to obtain it.

Another most curious variety belonging to the same group is given under the name of *argentea*. It is described as having the cones, and foliage of a splendid silvery hue. A single tree was found by Wittman near the village of Artamin, two days journey from Batum in Lasisthania. So remarkable is the account of this tree, that had it depended on the single specimen, we should have been inclined to assign its appearance to some accidental circumstance, but Nordmann also saw trees corresponding in colour on the Adshar range.

We are not informed if the whole range of the Caucasus has been examined, and neither the absolute or relative elevations at which the species are found are perfectly given in this work. The difficulty of forming a correct judgement on these points as well as that ascertaining the exact extent of the ranges mentioned is increased by the want of good maps. From the correctness with which the species are described, however, and the care which has been taken to place them before the reader, an approximation may be made to the attainment of this object. In commencing by the southern coast of the Black Sea, and following the ascending series, we have successively *P. halepensis*, *P. Laricio* (Auctorum), *Abies leioclada* (var. of Common Silver Fir), *A. Nordmanni*, *A. orientalis*, *P. uncinata* and varieties. This arrangement corresponds very nearly with that of the Pyrenees, the upper zone being formed of the hardier species of the group of *P. sylvestris*, with which are mixed the *A. orientalis* and *A. Nordmanni*, which attains a very high elevation, and is succeeded by *A. leioclada*, *P. Laricio*, and *P. halepensis*, that of the Pyrenees in running a line across Catalonia being *P. uncinata* and *sylvestris*, *A. pectinata*, *P. hispanica*, *P. Pinaster*, and *P. halepensis*. The chief difference is in the existence of the spruce, which is wanting in the Pyrenees, and the substitution of *P. Laricio* (or probably *taurica*), for the *hispanica* in the middle region. In both chains the Silver Fir predominates over the other species, and in both the larch is wholly wanting.

In addition to more accurate information as to the actual zones or order of superposition, we should have been glad to know what tree forms the next parallel to the region of firs. In the corresponding region of Europe the beech holds that place, and it would be interesting to ascertain whether in that part of Asia it retains its position or is replaced by some other genus.

The observation of these writers on the wood of *A. Nordmanni* is extremely valuable, and indicates a point which ought to be attended to in all descriptions of new species when it is possible to obtain it.

Another most curious variety belonging to the same group is given under the name of *argentea*. It is described as having the cones, and foliage of a splendid silvery hue. A single tree was found by Wittman near the village of Artamin, two days journey from Batum in Lasisthania. So remarkable is the account of this tree, that had it depended on the single specimen, we should have been inclined to assign its appearance to some accidental circumstance, but Nordmann also saw trees corresponding in colour on the Adshar range.

We are not informed if the whole range of the Caucasus has been examined, and neither the absolute or relative elevations at which the species are found are perfectly given in this work. The difficulty of forming a correct judgement on these points as well as that ascertaining the exact extent of the ranges mentioned is increased by the want of good maps. From the correctness with which the species are described, however, and the care which has been taken to place them before the reader, an approximation may be made to the attainment of this object. In commencing by the southern coast of the Black Sea, and following the ascending series, we have successively *P. halepensis*, *P. Laricio* (Auctorum), *Abies leioclada* (var. of Common Silver Fir), *A. Nordmanni*, *A. orientalis*, *P. uncinata* and varieties. This arrangement corresponds very nearly with that of the Pyrenees, the upper zone being formed of the hardier species of the group of *P. sylvestris*, with which are mixed the *A. orientalis* and *A. Nordmanni*, which attains a very high elevation, and is succeeded by *A. leioclada*, *P. Laricio*, and *P. halepensis*, that of the Pyrenees in running a line across Catalonia being *P. uncinata* and *sylvestris*, *A. pectinata*, *P. hispanica*, *P. Pinaster*, and *P. halepensis*. The chief difference is in the existence of the spruce, which is wanting in the Pyrenees, and the substitution of *P. Laricio* (or probably *taurica*), for the *hispanica* in the middle region. In both chains the Silver Fir predominates over the other species, and in both the larch is wholly wanting.

In addition to more accurate information as to the actual zones or order of superposition, we should have been glad to know what tree forms the next parallel to the region of firs. In the corresponding region of Europe the beech holds that place, and it would be interesting to ascertain whether in that part of Asia it retains its position or is replaced by some other genus.

The observation of these writers on the wood of *A. Nordmanni* is extremely valuable, and indicates a point which ought to be attended to in all descriptions of new species when it is possible to obtain it.

The power of resisting the attacks of insects which most probably proceeds from the nature of the sap, is of immense importance in the economic value of the tree. I think the wood of *P. Cembra* possesses the same quality. A remark has been made to me respecting the softness of this latter species as affecting its durability. Neither hardness nor softness of texture in timber are positive proofs either of durability or of the contrary. Some oaks, as the *Ilex*, and some American species are both hard and heavy, yet are valueless as to duration. It may be doubtful whether the heart wood of *P. Cembra* would bear much exposure to damp, but with the outer layers which contain the turpentine it is of very great durability. I suspect the same qualities belong to the Cedar of Lebanon, while the testimony is positive that it was used for the roof of the Temple, and there is no doubt that in a dry climate, protected from the vicissitudes of weather, it might last during periods, for which its texture apparently makes it quite unfit when exposed to a humid atmosphere.

It is to be hoped that means will be taken by those individuals as well as bodies who have correspondents at Odessa, to procure the introduction of seed of these species, more especially of the *A. Nordmanni*, which appears to be the most valuable of them.

It is impossible to close this subject when the variety of species are called into question, without remarking on the neglect with which this important subject is still treated by the Government. With the most ample means, of every kind, with gardens and parks, of which the extent and capabilities are the admiration of every one, we do not possess a common public botanical garden or arboretum for study or for reference. This circumstance we cannot but consider as disreputable and disgraceful to the Government and to the country, immense sums being annually expended in the department to which it properly belongs without a thought being cast on the advancement of science.

*Primitiæ Floræ Sarnicæ, or an Outline of the Flora of the Channel Islands of Jersey, Guernsey, Alderney, and Serk, &c.* By Charles C. Babington, M.A., F.L.S., F.G.S., &c. &c. Longmans, and Baillière, 1839.

This little book is far superior in value to many a work of higher pretensions, and will not fail to interest the general student of European botany, as well as to find a place in the pocket of every botanical visitant of the district to which it has especial reference. In all probability too it will increase the number of such visitants to a

The power of resisting the attacks of insects which most probably proceeds from the nature of the sap, is of immense importance in the economic value of the tree. I think the wood of *P. Cembra* possesses the same quality. A remark has been made to me respecting the softness of this latter species as affecting its durability. Neither hardness nor softness of texture in timber are positive proofs either of durability or of the contrary. Some oaks, as the *Ilex*, and some American species are both hard and heavy, yet are valueless as to duration. It may be doubtful whether the heart wood of *P. Cembra* would bear much exposure to damp, but with the outer layers which contain the turpentine it is of very great durability. I suspect the same qualities belong to the Cedar of Lebanon, while the testimony is positive that it was used for the roof of the Temple, and there is no doubt that in a dry climate, protected from the vicissitudes of weather, it might last during periods, for which its texture apparently makes it quite unfit when exposed to a humid atmosphere.

It is to be hoped that means will be taken by those individuals as well as bodies who have correspondents at Odessa, to procure the introduction of seed of these species, more especially of the *A. Nordmanni*, which appears to be the most valuable of them.

It is impossible to close this subject when the variety of species are called into question, without remarking on the neglect with which this important subject is still treated by the Government. With the most ample means, of every kind, with gardens and parks, of which the extent and capabilities are the admiration of every one, we do not possess a common public botanical garden or arboretum for study or for reference. This circumstance we cannot but consider as disreputable and disgraceful to the Government and to the country, immense sums being annually expended in the department to which it properly belongs without a thought being cast on the advancement of science.

*Primitiæ Floræ Sarnicæ, or an Outline of the Flora of the Channel Islands of Jersey, Guernsey, Alderney, and Serk, &c.* By Charles C. Babington, M.A., F.L.S., F.G.S., &c. &c. Longmans, and Baillièrè, 1839.

This little book is far superior in value to many a work of higher pretensions, and will not fail to interest the general student of European botany, as well as to find a place in the pocket of every botanical visitant of the district to which it has especial reference. In all probability too it will increase the number of such visitants to a

The power of resisting the attacks of insects which most probably proceeds from the nature of the sap, is of immense importance in the economic value of the tree. I think the wood of *P. Cembra* possesses the same quality. A remark has been made to me respecting the softness of this latter species as affecting its durability. Neither hardness nor softness of texture in timber are positive proofs either of durability or of the contrary. Some oaks, as the *Ilex*, and some American species are both hard and heavy, yet are valueless as to duration. It may be doubtful whether the heart wood of *P. Cembra* would bear much exposure to damp, but with the outer layers which contain the turpentine it is of very great durability. I suspect the same qualities belong to the Cedar of Lebanon, while the testimony is positive that it was used for the roof of the Temple, and there is no doubt that in a dry climate, protected from the vicissitudes of weather, it might last during periods, for which its texture apparently makes it quite unfit when exposed to a humid atmosphere.

It is to be hoped that means will be taken by those individuals as well as bodies who have correspondents at Odessa, to procure the introduction of seed of these species, more especially of the *A. Nordmanni*, which appears to be the most valuable of them.

It is impossible to close this subject when the variety of species are called into question, without remarking on the neglect with which this important subject is still treated by the Government. With the most ample means, of every kind, with gardens and parks, of which the extent and capabilities are the admiration of every one, we do not possess a common public botanical garden or arboretum for study or for reference. This circumstance we cannot but consider as disreputable and disgraceful to the Government and to the country, immense sums being annually expended in the department to which it properly belongs without a thought being cast on the advancement of science.

*Primitiæ Floræ Sarnicæ, or an Outline of the Flora of the Channel Islands of Jersey, Guernsey, Alderney, and Serk, &c.* By Charles C. Babington, M.A., F.L.S., F.G.S., &c. &c. Longmans, and Baillière, 1839.

This little book is far superior in value to many a work of higher pretensions, and will not fail to interest the general student of European botany, as well as to find a place in the pocket of every botanical visitant of the district to which it has especial reference. In all probability too it will increase the number of such visitants to a

The power of resisting the attacks of insects which most probably proceeds from the nature of the sap, is of immense importance in the economic value of the tree. I think the wood of *P. Cembra* possesses the same quality. A remark has been made to me respecting the softness of this latter species as affecting its durability. Neither hardness nor softness of texture in timber are positive proofs either of durability or of the contrary. Some oaks, as the *Ilex*, and some American species are both hard and heavy, yet are valueless as to duration. It may be doubtful whether the heart wood of *P. Cembra* would bear much exposure to damp, but with the outer layers which contain the turpentine it is of very great durability. I suspect the same qualities belong to the Cedar of Lebanon, while the testimony is positive that it was used for the roof of the Temple, and there is no doubt that in a dry climate, protected from the vicissitudes of weather, it might last during periods, for which its texture apparently makes it quite unfit when exposed to a humid atmosphere.

It is to be hoped that means will be taken by those individuals as well as bodies who have correspondents at Odessa, to procure the introduction of seed of these species, more especially of the *A. Nordmanni*, which appears to be the most valuable of them.

It is impossible to close this subject when the variety of species are called into question, without remarking on the neglect with which this important subject is still treated by the Government. With the most ample means, of every kind, with gardens and parks, of which the extent and capabilities are the admiration of every one, we do not possess a common public botanical garden or arboretum for study or for reference. This circumstance we cannot but consider as disreputable and disgraceful to the Government and to the country, immense sums being annually expended in the department to which it properly belongs without a thought being cast on the advancement of science.

*Primitiæ Floræ Sarnicæ, or an Outline of the Flora of the Channel Islands of Jersey, Guernsey, Alderney, and Serk, &c.* By Charles C. Babington, M.A., F.L.S., F.G.S., &c. &c. Longmans, and Baillière, 1839.

This little book is far superior in value to many a work of higher pretensions, and will not fail to interest the general student of European botany, as well as to find a place in the pocket of every botanical visitant of the district to which it has especial reference. In all probability too it will increase the number of such visitants to a



group of islands now, by the regular steam communication, so easy of access, and here shown to be so rich in botanical productions. The species enumerated amount "to 848," omitting (perhaps needlessly) as probably escaped from cultivation, 26 of those included in a catalogue by Professor La Gasca, lately published in a Report of the Jersey Agricultural and Horticultural Society. Cryptogamous plants also are excluded, with the exception of Ferns and *Characeæ*; the notice of the other orders of that class being almost confined to a bare list of Lichens, and a similar one of Algæ, in which last *Cystoseira barbata*, a very doubtful British species, is mentioned. The arrangement is according to the natural orders. Perhaps the Linnæan form might have proved more convenient to the majority of those likely to use the book as a vade-mecum. It has been the compiler's endeavour, he says, "to combine brevity with clearness; he has therefore only introduced descriptions or observations where either of them appeared to be really requisite, or where he conceived that he had some information to give." Thus the bulk of the volume is not increased, as is too commonly the case in local Floras, by characters and descriptions of well-known plants, often mere copies from standard works; but of such plants the trivial name alone, or with a few synonyms where they appeared requisite, is given with the localities; "the island in which a plant has been noticed being invariably mentioned," and under the more rare species the particular spots where they have occurred, together with the authority for the stations when the author himself has not gathered the plants. By far the greater number have been gathered by himself, in two visits to the islands in the summers of 1837 and 1838. Twenty-two of the species mentioned have not been published as British. Some of these however are now known to be natives of England.

The occasional remarks and descriptions are numerous, and of such a nature as to be interesting, as before intimated, to botanists in general, and not merely to those who have an opportunity of visiting the islands. They include critical remarks on differences, corrections of erroneous descriptions, investigations of synonyms, &c.; and throughout much regard for accuracy and much acuteness of observation are demonstrated, and much sound information is conveyed.

The preface contains, with other matters, an historical sketch of the little that had previously been done in the botany of the islands, beginning with the time of Ray, a short geographical notice of them, and a sketch of their geological structure; the last from the pen of F. C. Lukis, Esq. of Guernsey. It concludes with an expression of

group of islands now, by the regular steam communication, so easy of access, and here shown to be so rich in botanical productions. The species enumerated amount "to 848," omitting (perhaps needlessly) as probably escaped from cultivation, 26 of those included in a catalogue by Professor La Gasca, lately published in a Report of the Jersey Agricultural and Horticultural Society. Cryptogamous plants also are excluded, with the exception of Ferns and *Characeæ*; the notice of the other orders of that class being almost confined to a bare list of Lichens, and a similar one of Algæ, in which last *Cystoseira barbata*, a very doubtful British species, is mentioned. The arrangement is according to the natural orders. Perhaps the Linnæan form might have proved more convenient to the majority of those likely to use the book as a vade-mecum. It has been the compiler's endeavour, he says, "to combine brevity with clearness; he has therefore only introduced descriptions or observations where either of them appeared to be really requisite, or where he conceived that he had some information to give." Thus the bulk of the volume is not increased, as is too commonly the case in local Floras, by characters and descriptions of well-known plants, often mere copies from standard works; but of such plants the trivial name alone, or with a few synonyms where they appeared requisite, is given with the localities; "the island in which a plant has been noticed being invariably mentioned," and under the more rare species the particular spots where they have occurred, together with the authority for the stations when the author himself has not gathered the plants. By far the greater number have been gathered by himself, in two visits to the islands in the summers of 1837 and 1838. Twenty-two of the species mentioned have not been published as British. Some of these however are now known to be natives of England.

The occasional remarks and descriptions are numerous, and of such a nature as to be interesting, as before intimated, to botanists in general, and not merely to those who have an opportunity of visiting the islands. They include critical remarks on differences, corrections of erroneous descriptions, investigations of synonyms, &c.; and throughout much regard for accuracy and much acuteness of observation are demonstrated, and much sound information is conveyed.

The preface contains, with other matters, an historical sketch of the little that had previously been done in the botany of the islands, beginning with the time of Ray, a short geographical notice of them, and a sketch of their geological structure; the last from the pen of F. C. Lukis, Esq. of Guernsey. It concludes with an expression of

group of islands now, by the regular steam communication, so easy of access, and here shown to be so rich in botanical productions. The species enumerated amount "to 848," omitting (perhaps needlessly) as probably escaped from cultivation, 26 of those included in a catalogue by Professor La Gasca, lately published in a Report of the Jersey Agricultural and Horticultural Society. Cryptogamous plants also are excluded, with the exception of Ferns and *Characeæ*; the notice of the other orders of that class being almost confined to a bare list of Lichens, and a similar one of Algæ, in which last *Cystoseira barbata*, a very doubtful British species, is mentioned. The arrangement is according to the natural orders. Perhaps the Linnæan form might have proved more convenient to the majority of those likely to use the book as a vade-mecum. It has been the compiler's endeavour, he says, "to combine brevity with clearness; he has therefore only introduced descriptions or observations where either of them appeared to be really requisite, or where he conceived that he had some information to give." Thus the bulk of the volume is not increased, as is too commonly the case in local Floras, by characters and descriptions of well-known plants, often mere copies from standard works; but of such plants the trivial name alone, or with a few synonyms where they appeared requisite, is given with the localities; "the island in which a plant has been noticed being invariably mentioned," and under the more rare species the particular spots where they have occurred, together with the authority for the stations when the author himself has not gathered the plants. By far the greater number have been gathered by himself, in two visits to the islands in the summers of 1837 and 1838. Twenty-two of the species mentioned have not been published as British. Some of these however are now known to be natives of England.

The occasional remarks and descriptions are numerous, and of such a nature as to be interesting, as before intimated, to botanists in general, and not merely to those who have an opportunity of visiting the islands. They include critical remarks on differences, corrections of erroneous descriptions, investigations of synonyms, &c.; and throughout much regard for accuracy and much acuteness of observation are demonstrated, and much sound information is conveyed.

The preface contains, with other matters, an historical sketch of the little that had previously been done in the botany of the islands, beginning with the time of Ray, a short geographical notice of them, and a sketch of their geological structure; the last from the pen of F. C. Lukis, Esq. of Guernsey. It concludes with an expression of

group of islands now, by the regular steam communication, so easy of access, and here shown to be so rich in botanical productions. The species enumerated amount "to 848," omitting (perhaps needlessly) as probably escaped from cultivation, 26 of those included in a catalogue by Professor La Gasca, lately published in a Report of the Jersey Agricultural and Horticultural Society. Cryptogamous plants also are excluded, with the exception of Ferns and *Characeæ*; the notice of the other orders of that class being almost confined to a bare list of Lichens, and a similar one of Algæ, in which last *Cystoseira barbata*, a very doubtful British species, is mentioned. The arrangement is according to the natural orders. Perhaps the Linnæan form might have proved more convenient to the majority of those likely to use the book as a vade-mecum. It has been the compiler's endeavour, he says, "to combine brevity with clearness; he has therefore only introduced descriptions or observations where either of them appeared to be really requisite, or where he conceived that he had some information to give." Thus the bulk of the volume is not increased, as is too commonly the case in local Floras, by characters and descriptions of well-known plants, often mere copies from standard works; but of such plants the trivial name alone, or with a few synonyms where they appeared requisite, is given with the localities; "the island in which a plant has been noticed being invariably mentioned," and under the more rare species the particular spots where they have occurred, together with the authority for the stations when the author himself has not gathered the plants. By far the greater number have been gathered by himself, in two visits to the islands in the summers of 1837 and 1838. Twenty-two of the species mentioned have not been published as British. Some of these however are now known to be natives of England.

The occasional remarks and descriptions are numerous, and of such a nature as to be interesting, as before intimated, to botanists in general, and not merely to those who have an opportunity of visiting the islands. They include critical remarks on differences, corrections of erroneous descriptions, investigations of synonyms, &c.; and throughout much regard for accuracy and much acuteness of observation are demonstrated, and much sound information is conveyed.

The preface contains, with other matters, an historical sketch of the little that had previously been done in the botany of the islands, beginning with the time of Ray, a short geographical notice of them, and a sketch of their geological structure; the last from the pen of F. C. Lukis, Esq. of Guernsey. It concludes with an expression of

hope, in which we concur, that the attention of botanists may be attracted to a field probably far from being exhausted, and a request that those who may be so fortunate as to add new species or to observe new localities will communicate them to the author at his publisher's, that they may be employed in the preparation of a new edition. Whenever this appears, and we should expect it to be soon called for, we trust that one blemish, against which, at the risk of appearing hypercritical, we must protest, will be removed, namely, the commencing of substantive trivial names, and those formed from the proper names of persons, contrary to usual custom, with a small letter.

Mr. Babington has also recently published a Supplement to his 'Flora Bathoniensis,' containing numerous additions to that little work.

## PROCEEDINGS OF LEARNED SOCIETIES.

### ZOOLOGICAL SOCIETY.

Mr. Waterhouse exhibited a new species of Hare from the collection made for the Society by the late Mr. Douglas, and proposed to characterize it under the name of *Lepus Bachmani*: he thought it probable that the species had been brought from California. It was thus described:

*LEPUS BACHMANI.* *Lep. intensè fuscus, pilis fusciscenti-flavo nigroque annulatis; abdomine sordidè albo: pedibus suprâ pallidis, subtùs pilis densis sordidè fuscis indutis: caudâ brevi, albâ, suprâ nigricante, flavido adpersâ: auribus externè pilis brevissimis cinerescenti-fuscis, internè albidis, ad marginem externum, et ad apicem flavescensibus obsitis: nuchâ pallidè fusciscenti-flavâ.*

“Fur long and soft, of a deep gray colour at the base; each hair annulated near the apex with pale brown, and black at the points; on the belly the hairs are whitish externally; on the chest and fore-part of the neck the hairs are coloured as those of the sides of the body; the visible portion is pale brown, each hair being dusky at the tip; chin and throat gray-white. The hairs of the head coloured like those of the body; an indistinct pale longitudinal dash on the flanks just above the haunches: the anal region white. The general colour of the *tarsus* above is white; the hairs, however, are grayish-white at the base, and then annulated with very pale buff colour (almost white), and pure white at the points; the sides of the *tarsus* are brown; the long hairs which cover the under part of the *tarsus*, as well as that of the fore-feet, deep brown. The fore-feet above very pale

hope, in which we concur, that the attention of botanists may be attracted to a field probably far from being exhausted, and a request that those who may be so fortunate as to add new species or to observe new localities will communicate them to the author at his publisher's, that they may be employed in the preparation of a new edition. Whenever this appears, and we should expect it to be soon called for, we trust that one blemish, against which, at the risk of appearing hypercritical, we must protest, will be removed, namely, the commencing of substantive trivial names, and those formed from the proper names of persons, contrary to usual custom, with a small letter.

Mr. Babington has also recently published a Supplement to his 'Flora Bathoniensis,' containing numerous additions to that little work.

## PROCEEDINGS OF LEARNED SOCIETIES.

### ZOOLOGICAL SOCIETY.

Mr. Waterhouse exhibited a new species of Hare from the collection made for the Society by the late Mr. Douglas, and proposed to characterize it under the name of *Lepus Bachmani*: he thought it probable that the species had been brought from California. It was thus described:

*LEPUS BACHMANI.* *Lep. intensè fuscus, pilis fuscescenti-flavo nigroque annulatis; abdomine sordidè albo: pedibus suprâ pallidis, subtùs pilis densis sordidè fuscis indutis: caudâ brevi, albâ, suprâ nigricante, flavido adpersâ: auribus externè pilis brevissimis cinerescenti-fuscis, internè albidis, ad marginem externum, et ad apicem flavescensibus obsitis: nuchâ pallidè fuscescenti-flavâ.*

“Fur long and soft, of a deep gray colour at the base; each hair annulated near the apex with pale brown, and black at the points; on the belly the hairs are whitish externally; on the chest and fore-part of the neck the hairs are coloured as those of the sides of the body; the visible portion is pale brown, each hair being dusky at the tip; chin and throat gray-white. The hairs of the head coloured like those of the body; an indistinct pale longitudinal dash on the flanks just above the haunches: the anal region white. The general colour of the *tarsus* above is white; the hairs, however, are grayish-white at the base, and then annulated with very pale buff colour (almost white), and pure white at the points; the sides of the *tarsus* are brown; the long hairs which cover the under part of the *tarsus*, as well as that of the fore-feet, deep brown. The fore-feet above very pale

hope, in which we concur, that the attention of botanists may be attracted to a field probably far from being exhausted, and a request that those who may be so fortunate as to add new species or to observe new localities will communicate them to the author at his publisher's, that they may be employed in the preparation of a new edition. Whenever this appears, and we should expect it to be soon called for, we trust that one blemish, against which, at the risk of appearing hypercritical, we must protest, will be removed, namely, the commencing of substantive trivial names, and those formed from the proper names of persons, contrary to usual custom, with a small letter.

Mr. Babington has also recently published a Supplement to his 'Flora Bathoniensis,' containing numerous additions to that little work.

## PROCEEDINGS OF LEARNED SOCIETIES.

### ZOOLOGICAL SOCIETY.

Mr. Waterhouse exhibited a new species of Hare from the collection made for the Society by the late Mr. Douglas, and proposed to characterize it under the name of *Lepus Bachmani*: he thought it probable that the species had been brought from California. It was thus described:

*LEPUS BACHMANI.* *Lep. intensè fuscus, pilis fuscescenti-flavo nigroque annulatis; abdomine sordidè albo: pedibus suprâ pallidis, subtùs pilis densis sordidè fuscis indutis: caudâ brevi, albâ, suprâ nigricante, flavido adpersâ: auribus externè pilis brevissimis cinerescenti-fuscis, internè albidis, ad marginem externum, et ad apicem flavescensibus obsitis: nuchâ pallidè fuscescenti-flavâ.*

“Fur long and soft, of a deep gray colour at the base; each hair annulated near the apex with pale brown, and black at the points; on the belly the hairs are whitish externally; on the chest and fore-part of the neck the hairs are coloured as those of the sides of the body; the visible portion is pale brown, each hair being dusky at the tip; chin and throat gray-white. The hairs of the head coloured like those of the body; an indistinct pale longitudinal dash on the flanks just above the haunches: the anal region white. The general colour of the *tarsus* above is white; the hairs, however, are grayish-white at the base, and then annulated with very pale buff colour (almost white), and pure white at the points; the sides of the *tarsus* are brown; the long hairs which cover the under part of the *tarsus*, as well as that of the fore-feet, deep brown. The fore-feet above very pale

hope, in which we concur, that the attention of botanists may be attracted to a field probably far from being exhausted, and a request that those who may be so fortunate as to add new species or to observe new localities will communicate them to the author at his publisher's, that they may be employed in the preparation of a new edition. Whenever this appears, and we should expect it to be soon called for, we trust that one blemish, against which, at the risk of appearing hypercritical, we must protest, will be removed, namely, the commencing of substantive trivial names, and those formed from the proper names of persons, contrary to usual custom, with a small letter.

Mr. Babington has also recently published a Supplement to his 'Flora Bathoniensis,' containing numerous additions to that little work.

## PROCEEDINGS OF LEARNED SOCIETIES.

### ZOOLOGICAL SOCIETY.

Mr. Waterhouse exhibited a new species of Hare from the collection made for the Society by the late Mr. Douglas, and proposed to characterize it under the name of *Lepus Bachmani*: he thought it probable that the species had been brought from California. It was thus described:

*LEPUS BACHMANI.* *Lep. intensè fuscus, pilis fusciscenti-flavo nigroque annulatis; abdomine sordidè albo: pedibus suprâ pallidis, subtùs pilis densis sordidè fuscis indutis: caudâ brevi, albâ, suprâ nigricante, flavido adpersâ: auribus externè pilis brevissimis cinerescenti-fuscis, internè albidis, ad marginem externum, et ad apicem flavescensibus obsitis: nuchâ pallidè fusciscenti-flavâ.*

“Fur long and soft, of a deep gray colour at the base; each hair annulated near the apex with pale brown, and black at the points; on the belly the hairs are whitish externally; on the chest and fore-part of the neck the hairs are coloured as those of the sides of the body; the visible portion is pale brown, each hair being dusky at the tip; chin and throat gray-white. The hairs of the head coloured like those of the body; an indistinct pale longitudinal dash on the flanks just above the haunches: the anal region white. The general colour of the *tarsus* above is white; the hairs, however, are grayish-white at the base, and then annulated with very pale buff colour (almost white), and pure white at the points; the sides of the *tarsus* are brown; the long hairs which cover the under part of the *tarsus*, as well as that of the fore-feet, deep brown. The fore-feet above very pale